

CERTIFICATE OF COMPLIANCE FOR RADIOACTIVE MATERIAL PACKAGES

1. a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION NUMBER	PAGE	PAGES
9036	11	71-9036	USA/9036/B(U)-96	1	OF 2

2. PREAMBLE

- a. This certificate is issued to certify that the package (packaging and contents) described in Item 5 below meets the applicable safety standards set forth in Title 10, Code of Federal Regulations, Part 71, "Packaging and Transportation of Radioactive Material."
- b. This certificate does not relieve the consignor from compliance with any requirement of the regulations of the U.S. Department of Transportation or other applicable regulatory agencies, including the government of any country through or into which the package will be transported.

3. THIS CERTIFICATE IS ISSUED ON THE BASIS OF A SAFETY ANALYSIS REPORT OF THE PACKAGE DESIGN OR APPLICATION

- a. ISSUED TO (*Name and Address*)
- b. TITLE AND IDENTIFICATION OF REPORT OR APPLICATION

Source Production & Equipment Co.
113 Teal Street
St. Rose, LA 70087-9691

Source Production & Equipment Company
application dated February 28, 2001.

4. CONDITIONS

This certificate is conditional upon fulfilling the requirements of 10 CFR Part 71, as applicable, and the conditions specified below.

5.

(a) Packaging

- (1) Model No.: C-1
- (2) Description

The packaging consists of a steel inner unit inside an outer overpack. The inner unit is a rectangular box approximately 9" high x 7.5" wide x 7.5" deep around a depleted uranium shield. All fittings and source locking components are protected and enclosed within the 1/8" carbon steel outer shell. The inner receptacle consists of a uranium shield equipped with two closed bottom Zircalloy or titanium "J" tubes, each of which may house one "pigtail type" special form source. The overpack is a 12-gallon, 20- or 22-gage steel drum partially filled with foam. The weight of the inner unit is 51 to 70 lbs. The weight of the overpack is 19 to 22 lbs. Up to 8 lbs. of ancillary equipment may be included within the overpack. The maximum gross weight of the package is 100 lbs.

(3) Drawings

The package is constructed in accordance with Source Production & Equipment Company Inc. Drawing Nos. B322000, Rev. (3); B311000, Rev. (2); B311001, Rev. (1); and B311002, Rev. (0).

(b) Contents

(1) Type and form of material

Iridium-192, Selenium-75, and Ytterbium-169 as sealed sources that meet the requirements of special form radioactive material.

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(b) Contents cont'd

(2) Maximum quantity of material per package

Two sealed sources with a combined activity not to exceed 300 curies.

6. Tungsten shield pads, with dimensions up to approximately 2-inches diameter and 1/2-inch thick, may be welded to the inside surface of the source changer housing.
7. The nameplate shall be fabricated of materials capable of resisting the fire test of 10 CFR Part 71 and maintaining its legibility.
8. In addition to the requirements of Subpart G of 10 CFR Part 71:
 - a. The package shall be prepared for shipment and operated in accordance with the Operating Procedures of Section 7.0 of the consolidated application dated February 28, 2001, as supplemented June 23, 2006.
 - b. The package must meet the Acceptance Tests and Maintenance Program of Section 8.0 of the consolidated application dated February 28, 2001, as supplemented June 23, 2006.
9. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.
10. Revision No. 10 of this certificate may be used until October 31, 2007.
11. Expiration date: October 31, 2011.

REFERENCES

Source Production & Equipment Company applications dated September 27, 2000, and February 28, 2001.

Supplements dated: April 11 and May 11, 2001; and May 1, June 14 and June 23, 2006.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



Christopher Regan, Acting Chief
Licensing Section
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Date: August 7, 2006.



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION REPORT
Model No. C-1 Package
Certificate of Compliance No. 9036
Revision No. 11

SUMMARY

By application dated May 1, 2006, as supplemented on May 16, June 14, and June 23, 2006, Source Production & Equipment Co., Inc. (SPEC or the applicant), submitted a renewal and an amendment request for Certificate of Compliance No. 9036, for the Model No. C-1 package. SPEC requested an amendment for approval of a "-96" designation as well as other changes to their application. The certificate has been renewed for a five-year term.

EVALUATION

By application dated May 1, 2006, as supplemented on May 16, June 14, and June 23, 2006, SPEC requested approval for a "-96" designation for the C-1 package. The package was issued a "-85" designation to the package identification number on May 29, 2001. SPEC submitted information supporting the request for a "-96" approval. None of the changes indicated for a "-96" designation are applicable to the C-1 package. Changes to the package design are not required in order to meet the provisions for a "-96" designation. The package identification number has been revised to USA/9036/B(U)-96 to indicate that the package meets the requirements of the revised 10 CFR Part 71 regulations that became effective October 1, 2004 (69 FR 3698). Based on the statements and representations in the application, the staff concluded that the design has been adequately described and meets the requirements of 10 CFR Part 71 for a "-96" approval.

Condition No. 5.(a)(2) of the certificate was revised to change wording describing the transport package.

Condition No. 5(a)(3) was changed to show Revision No. 3 as the latest revision to Drawing No. B322000. The drawing was revised to describe the overpack in sufficient detail and to focus on safety features of the outer packaging and components significant in the performance of the package. The drawing also includes material specifications for the drum lid and ring, the nameplate and trefoil, and the rivets used to attach the nameplate and trefoil, which are all stainless steel.

Condition No. 5(b)(1) was revised to reflect the changes SPEC requested to the type and form of material, and contents of the C-1 package. SPEC requested an increase in the activity from two sources with a combined strength of 240Ci to 300Ci of Iridium-192. Through linear extrapolation of the maximum surface and 1-meter dose-rates created by 240Ci of Iridium-192, the 300Ci of Iridium-192 dose-rates remain within the limits specified in 10 CFR Part 71 for non-exclusive use. The dose rate of 99.5 [mrem/hr] is increased to 124.4 [mrem/hr], which is less than 200 [mrem/hr]; the dose rate of 4.7 [mrem/hr] is increased to 5.9 [mrem/hr], which is less

than 10 [mrem/hr]. SPEC also requested the addition of two more radionuclides, Selenium-75 and Ytterbium-169, to the approved contents of the package. The staff also performed a simple MicroShield test to verify that any dose-rates created by 300Ci of Selenium-75 or Ytterbium-169 would be bounded by 300Ci of Iridium-192. Containment of the radioactive material is provided by a sealed source capsule, which meets the requirements of special form radioactive material. The source remains within the packaging under normal and hypothetical accident conditions. Based on the review of the statements and representation in the application, the staff concludes that the containment and shielding designs have been adequately described and evaluated, and that the performance of the package meets the containment and shielding requirements of 10 CFR Part 71.

Condition No. 8 was revised to include supplements to Sections 7 and 8 of the consolidated application.

Condition No. 9 of the certificate clarifies that the package is approved for use under the general license provisions of 10 CFR 71.17. This change is due to a revision in the renumbering of certain sections in 10 CFR Part 71 regulations that became effective on October 1, 2004 (69 FR 3698).

The certificate was revised to include Condition No. 10, which authorizes the use of the previous revision of the certificate for a period of approximately 1 year.

SPEC also requested renewal of Certificate of Compliance No. 9036, for the Model No. C-1 package. The staff reviewed the documents referenced in the certificate and determined that the documentation was available and complete. The staff also reviewed the package's operations and maintenance program for the package and found them to be adequate. The certificate has been renewed for a 5-year term that expires on October 31, 2011.

CONCLUSION

As requested by the applicant the package identification number has been revised to include the "-96" designation. The Certificate of Compliance has also been revised to include the amendments requested by the applicant. The Certificate of Compliance has been renewed for a 5-year term that expires on October 31, 2011. These changes do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. 9036, Revision No. 11 on
August 7, 2006.